



**MTS**<sup>®</sup>  
METALS TREATMENT SOLUTION

## Metals Treatment Solutions

Chemistry for sustained and reliable heavy metals remediation

### Benefits Include

Reduce Leachable concentrations of metals

Applicable in soil piles and in-situ applications for groundwater treatment

Economical solution compared to other available products

Soluble solutions available for better injection ROI

### Proven Field Applications

Excavation-treat-reuse onsite for impacted soils

Direct Push Injection into groundwater zone

Slag and other metals residual treatment applications

Combined with cement for stabilization applications

### Applicable to Heavy Metals Treatment including:

Aluminum (Al)

Arsenic (As)

Boron (B)

Cadmium (Cd)

Cobalt (Co)

Copper (Cu)

Hexavalent Chromium (CrVI)

Lead (Pb)

Lithium (Li)

Mercury (Hg)

Molybdenum (Mo)

Nickel (Ni)

Selenium (Se)

Thallium (Th)

Zinc (Zn)

Uranium (Ur)

Among others

### Applicable to Other COCs:

Fluoride

Cyanide

Industrial Slag / Waste

The MTS<sup>®</sup> chemistries are technologically advanced formulations of engineered chemistries for the use in chemical stabilization of heavy metals. Decades of metals remediation employing precipitation, coprecipitation, chemical stabilization and adsorption methods have culminated into the MTS<sup>®</sup> group of chemistries comprised of the following components depending upon target contaminants.

#### Materials

Activated Carbon

Calcium Carbonate

Iron Sulfate

Iron Powder

Iron Sulfide ("Mackinawite")

Magnesium Oxide

Magnesium Hydroxide

Phosphate

Sulfide

Zeolite

#### Physical Properties

Form: Powder and liquid solutions

Density: 1.2 – 3 g/cm<sup>3</sup>

Odor: None to Slightly acrid

Solubility in water: Some components are insoluble

Color: variable

Vapor Pressure: N/A

### For In-Situ and Ex-Situ Remediation, Landfill, Mining, and Industrial Applications:

Each of the MTS<sup>®</sup> chemistries are proprietary and site-specific engineered formulations of chemical reduction chemistries for use in chemical sequestration and immobilization of heavy metals as a stand-alone remediation solution or in combination with stabilization and solidification applications.

Decades of heavy metals chemical reduction remediation and sequestration experience have culminated into the Metals Treatment Solution (MTS<sup>®</sup>) product group comprising multiple proprietary engineered chemistries that target many heavy metal contaminants.

MTS<sup>®</sup> chemically binds metal ions in the free liquids and immobilizes them within the soil / substrate thereby reducing their solubility through the chemical reaction. The physical characteristics of the chemically reduced or sequestered contaminated material is not changed by this process with respect to geotechnical properties for redevelopment. It also does not interfere with biological systems or native biota if shallow enough to be in the root zone.

Technical design support, references, papers, and reliable customer service available to all customers.